



**Tina Seelig, PhD**  
**InGenious: Levers for Unlocking Creativity**

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Is it possible to enhance creativity? Absolutely. The key is to move from convergent thinking where there is one right answer to divergent thinking where there are an infinite number of right answers.

**Nine specific ways to enhance creativity:**

1. **Observation.** Pay attention to the world around you. In an experiment with two groups of people, those who self-identified as lucky and those who self-identified as unlucky, the group that self-identified as lucky consistently performed tasks more accurately and quickly (and received financial reward) due to paying attention to environmental cues. This group's lifelong experience of "luck" appears to be due to their ability to observe what others were not able to see, thus gaining a competitive advantage as well as financial reward.
2. **Connect and Combine Ideas.** Ancient crossroads were the sites of great innovation due to cross-fertilization of ideas. Trade is to creativity as sex is to biology (crossover in chromosomes leads to new traits). One way to practice connecting and combining is by using metaphors/similes to help understand an idea on a new level. An example: Ideas are like shoes, since they take you to new places, you can never have too many, they are more comfortable the more time you spend in them. Consider that creative works such as art, poetry, and dance all employ metaphors. A good test of the ability to connect and combine ideas is measured by the "one word" admissions exam given by All Souls College at Oxford University. Students are given three hours to write an essay from a one word thematic prompt, such as "justice," drawing upon all the knowledge they have in history, science, philosophy and other disciplines.
3. **Challenge Assumptions.** The entire audience participated in an exercise of coming down to the gym floor and lining up by birthdate without speaking. Most in the audience raised their hands with fingers indicating their birth month. The

results were not very accurate. The lesson is that most of the time people go with the 1<sup>st</sup> right answer, usually an obvious answer which is only incrementally effective. Go past the 1<sup>st</sup> set of ideas to the 3<sup>rd</sup> set of ideas, and open up the landscape of possibilities.

4. **Reframe Problems.** Make sure you are asking the right question. For example, NASA spent millions to come up with a pen that writes in space, asking the question, “How can we make a pen that writes in space?”; Russia instead asked, “How can we write in space?” and decided on a pencil. Another example: “How can we design a better nametag?” is better framed as “How can we design a better introduction device?”
5. **Space Matters.** Physical surroundings affect how we feel and act. For example, consider a colorful kindergarten class with shared spaces and lots of manipulatives and compare to the typical classroom with an array of desks or the typical office with an array of cubicles. Places like Pixar and IDO have stimulating, shared spaces with manipulatives, just like in kindergarten.
6. **Time Matters.** Creativity under pressure can be amazing over a short time. For example, in the movie *Apollo 13* the engineers must make something square fit into a round hole to keep the astronauts from asphyxiating. Having a mission in a short time leads to amazing innovation. However, unrelenting pressure over long periods squashes creativity.
7. **Rules Matter.** In a way, everything is a game – family, work – everything is about rules and acting accordingly. Little changes in rules affect people’s behavior. People look to the rules of the game and make decisions. For example, in a game like Scrabble, loosening the rules led to players getting sloppy, just putting down their first idea; but tightening the rules led players to work harder, get more creative, and competition broke down as players began to work together. Another example is that in France, 80% of people want to work for the government, and it is difficult to get workers to join startups, because of the “rule” that startup employees don’t receive stock.
8. **Experiment.** Try lots of things and keep what works. Make easy, fun, quick, dirty prototypes instead of polishing before presenting. Show things to people very early and get feedback before you become too invested in it. For example, employees presented a potential iPhone game using a large cutout cardboard iPhone with actors seen through the cutout.
9. **Attitude.** The mindset that you CAN solve the problem is crucial, or else it will never happen. One idea is to pick a random object and tell yourself that somehow that object is going to help you solve your problem. For example, a student needed to get a large piece of furniture moved but did not have a truck or a friend with a truck. She looked around her room, saw a case of wine, and determined that somehow that would help her achieve her objective; within two hours she had moved her furniture by using craigslist to trade the wine for the use of a truck.